PLANAR

INSTALLATION PROFILE
Cardinal Glass Industries

PLANAR VIDEO WALLS CREATE 21ST CENTURY CONTROL ROOM

Minneapolis-based Spye specializes in the creation of digital environments for commercial and residential customers worldwide. Among its flagship projects is a new control room just completed for the float glass plant of Cardinal Glass Industries, located in Portage, Wisconsin.

The 350,000 square-foot plant is a producer of high-quality glass products, with manufacturing lines running practically non-stop, year-round. "Our goal was to provide the plant a new, 21st-centry control room with mission-critical capabilities that would enable it to maintain the stellar reputation it has earned from its loyal customer base," says Shane Seira Spye's president.

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> *President, Spye*

Spye's specific challenge was to provide a state-of-the-art technology upgrade to the plant's existing control room, giving operators an advanced platform for continuous and reliable monitoring of the manufacturing process. "We had the experience to know what technology was required to meet these objectives, which is why we specified Planar's Clarity® Matrix™ LCD Video Wall System as the primary operational interface," Seira adds.

14-panel video wall is optimal control and decision-making platform
Centerpiece of the new, nearly 1,000 square-foot control room is the a seven-wide by two-high (7x2) array of 46-in Clarity Matrix LCD video wall displays. The video wall provides operators with live camera feeds of key areas of the manufacturing line, enabling them to

see actual conditions in each area, as well as a continuous flow of production data. This includes at-the-second reporting on the status of factors and properties of glass being produced, such as the mixing of raw materials, and furnace temperatures. "By providing a big, bright, clear view of all of this data on the Clarity Matrix video wall, we've given operators an optimal decision-making tool; one that ensures Cardinal's end products will meet or exceed customers' standards for quality and performance," Seira continues.

Clarity Matrix video walls feature commercial-grade LCD displays designed with exceptional viewing qualities. These include industry-leading brightness (700 nits) and contrast ratio (3500:1). Further, the tiled bezel width of Clarity Matrix is 6.7mm, providing Cardinal Glass operators a virtually seamless view of all critical process data and of camera feeds from the manufacturing area.

Spye specified Planar® Extended Ruggedness and Optics (ERO™) technology for the main Clarity Matrix video wall, made up of Clarity Matrix MX46 displays. Planar ERO supports an electronic annotation solution Spye provided that enables operators to mark directly on the displays in order to gauge the width of the glass being made. Planar ERO is optically-bonded glass that covers the entire video wall, giving it durability and protection, and enhancing viewing by reducing glare. Planar ERO was provided in case the electronic annotation hardware failed. This way, if that part of the system went down they could physically mark on the displays until the electronic annotation hardware was repaired/replaced.

Each Clarity Matrix LCD display incorporates a single, simple interface module that allows power, control and other elements to be remotely located, thus keeping depth, weight, heat and points of failure to an absolute minimum. This module pairs perfectly with Planar® EasyAxis™ Mounting System that facilitates precise, six-axis alignment and provides a perfectly flat viewing surface that is lightweight, easy to install and simple to service.

In addition to the main control room video wall, Spye also installed a three-by-three (3x3) Clarity Matrix Touch video wall (compried of MX46 models with Planar ERO technology as well) that is also used for process monitoring, augmenting the capability of the larger wall. This 3x3 touch video wall further serves as a demonstration platform; Cardinal personnel use it to showcase the company for plant visitors, using a hand-held tablet to call up and display interactive content that is separate from the process information uSpye by control room operators to monitor the manufacturing process.

"Clarity Matrix creates an immersive experience that enhances control efficiency and productivity, and impresses customers, prospects and visitors with its style and aesthetic."

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Planar excels in design and support
Seira says that Spye understood the importance of providing Cardinal Glass with the monitoring technology to match the needs of the company's demanding manufacturing operation. He adds that Spye also recognized the value of Clarity Matrix's unique style and aesthetic. "We knew it would create an immersive experience that would enhance control efficiency and productivity, as well as impress customers, prospects and visitors alike."

Spye places significant value on Planar's three-year, advanced replacement warranty. "This warranty ensures that Cardinal has a control room interface it can always count on. And Planar's strong commitment to customer support gives plant managers confidence that if any problems arise with either Clarity Matrix video wall, Planar will work closely with the company to solve them quickly, efficiently and cost-effectively."